REMARKS

An Interview was conducted on February 4, 2009, where it was submitted that the claimed invention is unobvious because the cited Boudreau *et al.* reference teaches away from the claimed invention. Applicant's representative would like to thank the Examiner for his time and consideration in conducting the Interview.

Claims 1 and 3-5 are presented for examination.

Rejection under § 103(a)

The Office Action rejected Claims 1 and 3-5 as being unpatentable over WO 02/34863 ("Boudreau *et al.*"). Although the Office Action acknowledged that the reference fails to teach the claimed "ratio a/b" (mMole/mL) to be 0.05, it was alleged that the molar ratio of a/b is "one of the parameters of particle solubility" and that the reference sufficiently suggests the particle solubility in ionic liquid.

However, as discussed during the Interview, Boudreau *et al.* teaches away from the claimed invention and does not teach the essential point of "*transferring* said fine particles from said aqueous medium to the ionic liquid and concentrating the fine particles into the ionic liquid." (emphasis added). Nano-particles prefer to transfer from an aqueous phase to an ionic liquid phase, because the polarity of the ionic liquid is stronger than that of water. The reference makes no mention of nano-particles, nor is there any language indicating the dispersed mercaptide salts' electrokinetic potential ("zeta potential") to be caught by the ionic liquid. From Boudreau *et al.*, it would be reasonable to consider that the formed mercaptide salts are transferred by gravity. Therefore, it is clear that the cited reference does not teach the method

where the dispersed particles are caught by zeta potential into the ionic liquid.

Furthermore, the conclusions reached in the Final Office Action with respect to the ratio a/b are far too general. Boudreau *et al.* does not indicate what constitutes a satisfactory range for ratio a/b; and the claimed ratio is, in fact, more than just a parameter of particle solubility. The specific level of concentration a/b of the "fine particles into the ionic liquid" is critical to the invention where the specification teaches that even if particle size is changed, the amount of the ionic liquid that needs to be added to reach the claimed concentration is not changed. Therefore, particle size in the claimed invention does not depend upon the amount of the ionic liquid that is added to the aqueous dispersion.

For example, where a/b is 0.5-1.0, phase separation does not occur. Liquid drops of ionic liquid, which are colored slightly blue, appear at the bottom of the bottle. When the ratio a/b is greater than 1.0, the color becomes transparent, and fine particles of polydiacetylene are almost perfectly recovered in liquid drops of the ionic liquid. When the ionic liquid is further excessively added, the size of liquid drops becomes larger. Therefore, the claimed ratio a/b does not simply describe particle solubility in an ionic liquid. "Solubility" cannot be substituted for the claimed "concentration." It would not have been "obvious to try" to make the claimed ratio a/b with a reasonable expectation of success. See In re Zurko, 258 F.3d 1379, 59 U.S.P.Q.2d 1693 (Fed. Cir. 2001) (holding an assertion of common knowledge cannot be relied upon to overcome deficiencies in the prior art without evidentiary support). For the reasons previously stated, it is submitted that Boudreau *et al.* teaches away from the claimed invention.

Conclusion

In light of the foregoing, it is submitted that the application is now in condition for allowance. It is therefore respectfully requested that the rejection be reconsidered and withdrawn, and the application passed to issue.

Respectfully submitted,
HAHN & VOIGHT PLLC

/Roger C. Hahn/
Attorney for Applicants
Roger C. Hahn
Reg. No. 46,376